HDOM-RM-Keypad User Manual

1. About HDOM-RM-Keypad

HDOM-RM-Keypad can operate the HD700 drive by Modbus RTU serial comms. The maximum length of cable is up to 300 meters.

1.1 Features

The main features of the HDOM-RM-Keypad are as follows:

- Displays parameter.
- Fast editing/browsing/copying parameters.
- Own processer chip, supporting hot fit and unfit.
- Using the drive or external 24VDC supply and communicating through the RS485 signal.
- Meeting ELV.

2. Technical specifications

Electrical characteristics	
Communication speed	19200bps
Power	625mW
Signal	Standard RS-485 protocol signal
Environment and mechanical characteristics	
Operating environment	Indoor, no direct sunlight, non-flammable, corrosive gasses
Operating temperature	−10□～+40℃
Operating humidity	≤90% RH, non-condensing
Storage temperature	−40□～+70℃
Communication distance	≤300m
Weight	130g
IP rating	IP20

3. Installation and dimensions

3.1 Overall dimensions

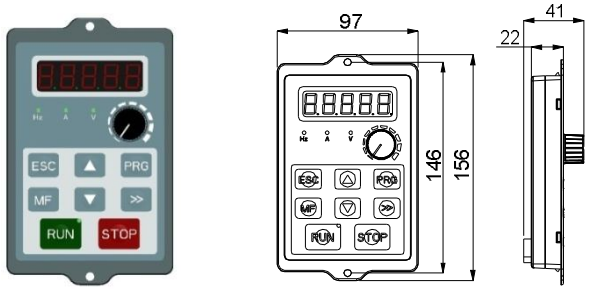

Figure 1 Outline and dimensions

3.2 Mechanical dimensions and mounting

There are three methods for mounting the HDOM-RM-Keypad.

- Using tapping screws to fix the keypad on the back of the four corners. The hole spacing and hole dimensions as shown in method 1 of figure 2.
- When the panel thickness is less than or equal to 1.2mm, the rectangle hole on the panel required for mounting the keypad should be 135mm×93.5mm. Fixing the keypad using clips on the keypad. If making two ø5 holes on the panel, fixing the keypad better using two M5 screws with nuts. As shown in method 2 of figure 2.
- When the panel thickness is greater than 1.2mm, the rectangle hole on the panel required for mounting the keypad should be 137mm×93.5mm. Fixing the keypad using clips on the keypad. If making two ø5 holes on the panel, fixing the keypad better using two M5 screws with nuts. As shown in method 3 of figure 2.

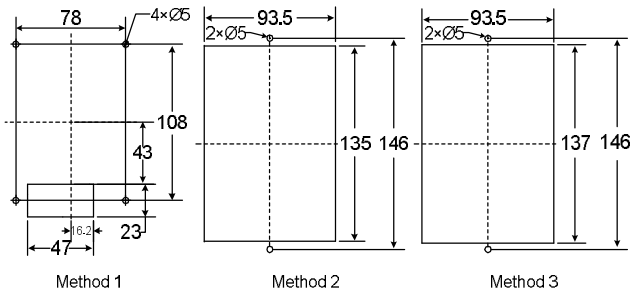

Figure 2 Mounting and hole dimensions

4. Usage

4.1 Connections

There is an RJ45 port and four terminals on the back of the HDOM-RM-Keypad. As shown in figure 3.

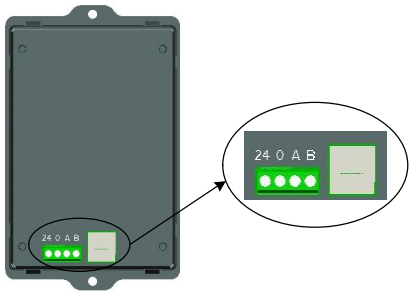

Figure 3 Connectors on the back

Functions of the RJ45 port and terminals can be found in the table below:

Name	Function
RJ45	Standard RJ45 port, used for communication with the drive, Modbus RTU protocol
A	RS-485 plus signal, used for communication with the drive, Modbus RTU protocol
B	RS-485 minus signal, used for communication with the drive, Modbus RTU protocol
24	Positive 24V power supply
0	Common reference for 24V power supply

4.2 How to use

4.2.1 Connection between HDOM-RM-Keypad and the drive

There are two ways to connect the HDOM-RM-Keypad with the drive. Port connection: insert one end of the cable into RJ45 port of the drive, and insert the other end of the cable into RJ45 port of HDOM-RM-Keypad. The cable must be parallel. Line sequences in two plugs are the same. Terminal connection: connect HDOM-RM-Keypad terminals 24, 0, A and B to the drive terminals 24V, 0V, A and B, respectively.

4.2.2 Set-up parameters

When HDOM-RM-Keypad is connected to the drive, power up, then set the following parameters by pressing the buttons.

P00.23 (P05.03) =1 can display all parameters

P00.04 (P10.07) =2 communication control mode

P00.05 (P01.01) =5 serial communications

The user can use HDOM-RM-Keypad to control the drive after setting the above parameters.

Note:

- HDOM-RM-Keypad can only be used with the HD700 series drives that use MCU software version V2.5.1. When operating the remote keypad, please do not operate the drive and the LED/LCD keypad at the same time.
- When using the remote keypad, the drive can't communicate with other devices.
- The remote keypad's switches function is the same as the HD700 LED/LCD keypad's switch function. See *HD700 User Manual* chapter 3 for details.
- When setting parameters through the remote keypad after resetting the factory defaults, it is necessary to set P03.08 to 1 or power up again first.

4.2.3 Reference source switching

There are two reference sources.

Potentiometer mode: adjust reference frequency by adjusting the potentiometer on the remote keypad.

Digital mode: increase or decrease the frequency by pressing the or button.

4.2.4 Parameter cloning

Upload parameters: Set P05.04=1 for uploading parameters to the remote keypad.

Download parameters: load factory defaults first (P00.24=1) and then set P05.04=2 for downloading parameters to the drive.

If trip F015 is initiated, it means that parameter cloning has failed. Reset this trip by pressing the "STOP" button and then clone parameters again.

Note: the different version of the software parameters can't cloned each other.

5. Fault diagnosis

When HDOM-RM-Keypad displays "-----", it means that communication between HDOM-RM-Keypad and the drive is interrupted. Buttons are invalid at that time. Check details as below:

- Is wiring is correct?
- Are the communication parameters are set correctly?

  P10.02=1

  P10.03=3

  P10.04=1

Except the above communication trips, other trips may also occur in the following table.

Trip code	Trip description	Possible reason	Corrective action
F061	Remote keypad cloning wrong	The remote keypad memory has no data when downloading from the remote keypad	Upload the parameters to the remote keypad and then download
		Data loss	Power up again; Contact service
		Internal fault	Power up again; Contact service
F062	Remote keypad program overflow	Internal fault	Power up again; Contact service
F063	Remote keypad watchdog failure	Internal fault	Power up again; Contact service

Note: HDOM-RM-Keypad can display the trip codes.

6. Service agreement

The warranty period of HDOM-RM-Keypad is 12-months, within which period HEDY conducts free maintenance and repair to the product that has any fault or damage under the normal operation conditions. The start time of warranty period is the delivery date of the product. Even within 12 months, maintenance will also be charged in the following situations:

- Damages incurred to the product due to misoperations, which are not in compliance with the User Manual;
- Damages incurred to the product due to misoperations, which are not permitted by the factory supplier, such as modifications to devices;
- Out of the HDOM-RM-Keypad specification application;
- Damages incurred to the product due to unforeseeable natural disasters, such as fire, flood, earthquake, etc.
- Without HDOM-RM-Keypad serial number or the S.N. so that it cannot be identified clearly.